

Data sheet

Actuators for three point control

AMV 25 SD - safety function (spring down)

AMV 25 SU - safety function (spring up)

Description



AMV 25 SD or SU electric actuators are used with valves gen.2009 type VRB, VRG, VF, VL with additional adapter (Code No. 065Z0311, not supplied) and VFS 2 valves up to DN 50 diameter.

The actuator automatically adapts its stroke to valve end positions which reduces commissioning time. Optional auxiliary switches, feedback potentiometer and valve stem heater are available.

The actuator has some special features:

- The advanced design incorporates load related 'switch-off' to ensure that actuators and valves are not exposed to overload;
- Digitale feedback end position indication signal for valve end position is available by terminal 4 or 5;
- Low weight and robust;
- Safety function versions:
 - SD (spring down)
 - SU (spring up).

Main data:

- Nominal voltage:
 - 24 VAC, 50 Hz/60 Hz
 - 230 VAC, 50 Hz/60 Hz
- Control input signal: 3 point
- Force: 450 N
- Stroke: 15 mm
- Speed: 15 s/mm
- Max. medium temperature: 150 °C
- End-position signals

Ordering

Actuator

Type	Supply voltage	Code No.
AMV 25 SD (spring down)	24 V~	082H3036
AMV 25 SU (spring up)	24 V~	082H3039
AMV 25 SD (spring down)	230 V~	082H3037
AMV 25 SU (spring up)	230 V~	082H3040

Accessories

Type	Code No.
Additional switches (2x)	082H7015
Additional switches (2x) and potentiometer (10 kΩ)	082H7016
Additional switches (2x) and potentiometer (1 kΩ)	082H7017
Adapter for VFS 2 valve DN 15-50 (for media temp. over 150 °C)	065Z7548
Adapter for VRB/VRG/VF/VL valves (gen.2009) DN 15-50	065Z0311*
Stem heater for VFS 2 valve DN 15-50	065B2171
Clutch AMV(E) 25, AMV(E) 35	003G6396

* Need to be ordered separately.

Technical data

Power supply	V	24, 230 AC
Power consumption	VA	12
Frequency	Hz	50/60
Control input		3-point
Close of force	N	450
Max. stroke	mm	15
Speed	s/mm	15
Max. medium temperature	°C	150 (200 - for VFS valve with adapter)
Ambient temperature		0...55
Storage and transport temp.		-40 ... 70
Protection code		IP 54
Weight	kg	2,3
- marking in accordance with standards		EMC Directive 89/336/EEC, 92/31/EEC, 93/68/EEC, EN 50081-1 and EN 50082-1 Low Voltage Directive 73/23/EEC and 93/68/EEC, EN 60730/2/14

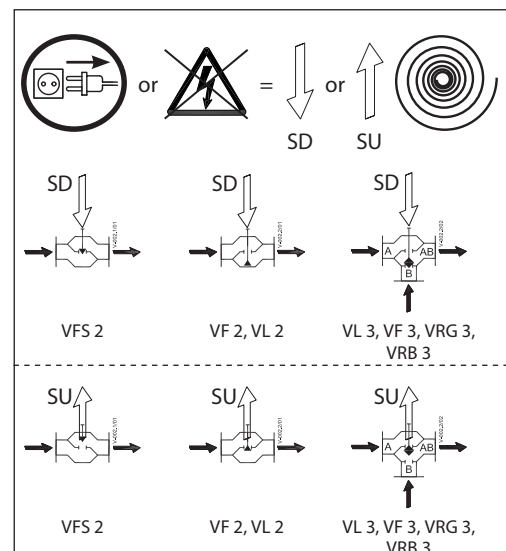
Safety function

The safety function will fully open or close the valve by power failure, depending upon the chosen safety action (SD/SU). Valve selection will also affect the safety action. The safety function unit is factory fitted to the rear of the actuator.

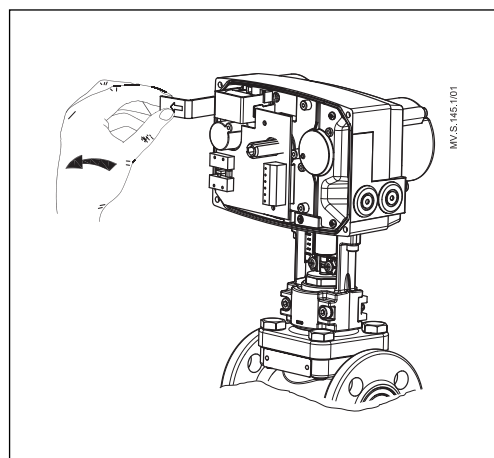
• not in accordance to DIN EN 14597

Valve type	Spring action selection will	
	Close port A-AB	Open port A-AB
VRG, VRB	SU	SD
VL (DN 15-50)	SU	SD
VF (DN 15-50)	SU	SD
VFS 2 (DN 15-50)	SD	SU

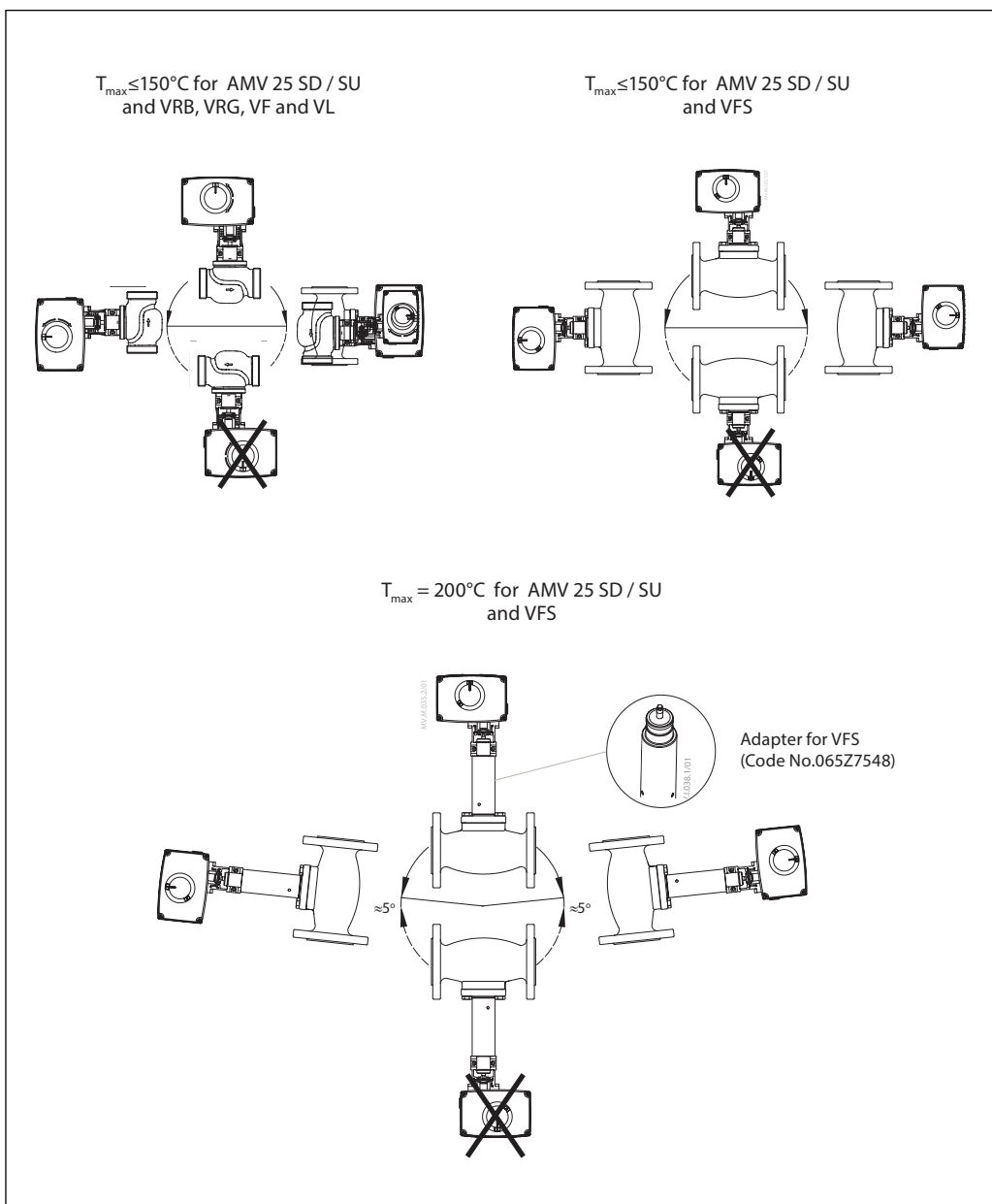
Note: Do not use safety activations for ON/OFF regulation.



Safety function activation
(AMV 25 SD only)



Installation



Mechanical

Use 4 mm Allan key (not part of actuator delivery) to mount actuator on the valve. Installation of the valve with the actuator is allowed in horizontal position or upwards. Installation downwards is not allowed.

The actuator must not be installed in an explosive atmosphere, at ambient temperature lower than 0 °C or at ambient temperature higher than 55 °C. It must not be subject to steam jets, water jets or dripping liquid as well.

Note: the actuator may be rotated up to 360° with respect to the valve stem by loosening the retaining fixture. Once the actuator is placed, retighten the fixture.

Electrical

Electrical connections can be accessed by removing the actuator cover. Two cable gland entries with thread (M20 x 1.5 and M16 x 1.5) are prepared for cable glands.

Note: Cable and cable gland used must not compromise the actuator's IP rating, and must ensure the connectors are fully strain relieved. Please observe local rules and regulations as well.

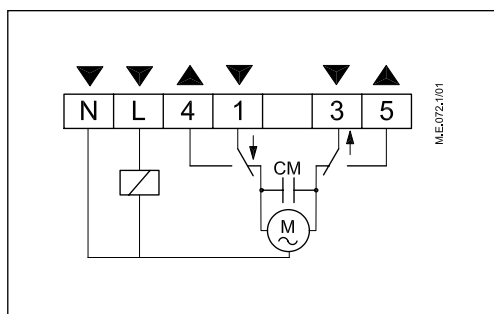
Wiring



230 VAC version:

Do not touch anything on the PCB!

Do not remove the cover before the power supply is fully switched off.



Terminals 1, 3:

Control voltage input from the controller.

Terminals 4, 5:

Output used for position indication or monitoring.

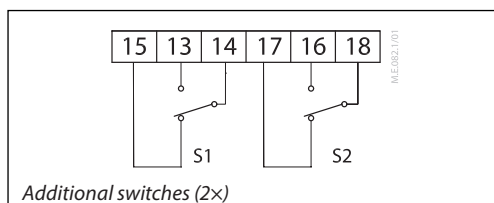
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Power supply 24 or 230 V~

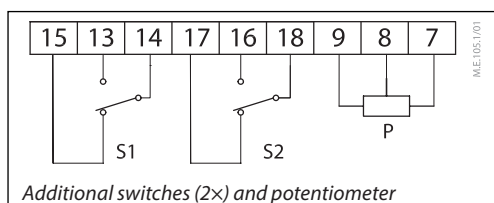
N

Common (0 V)

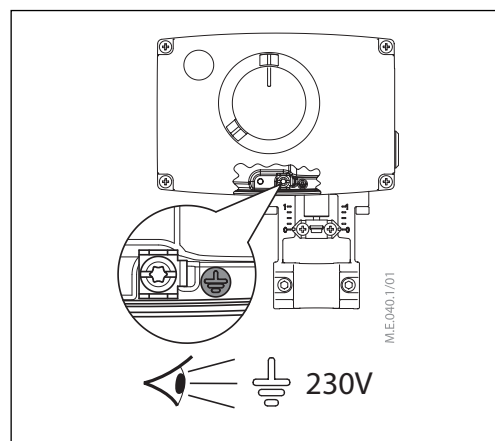
Accessories



Additional switches (2x)



Additional switches (2x) and potentiometer



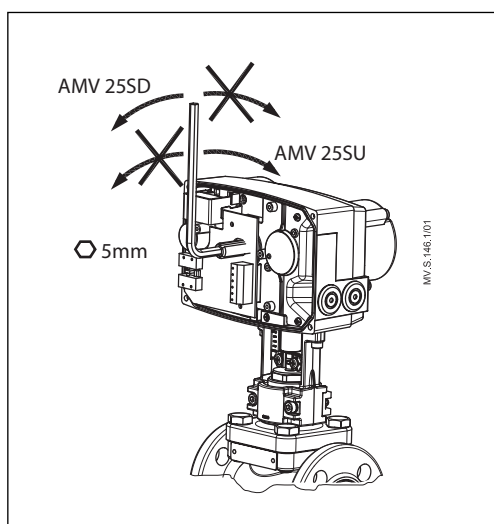
Commissioning

Complete the mechanical and electrical installation and perform the necessary checks and tests:

- Turn on the power.
- Set the appropriate control signal and check that the valve stem direction is correct for the application.

The unit is now fully commissioned.

Manual override



Manual override is done by means of positioning spindle inside the actuator:

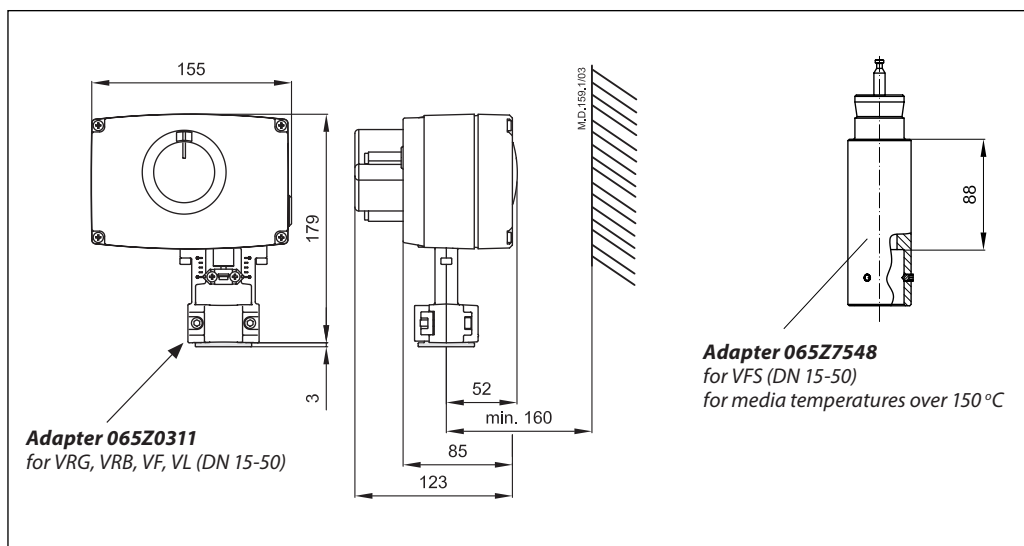
- Disconnect power signal
- Remove the actuator cover
- Insert 5 mm Allen key (not part of actuator delivery) into the top of the positioning spindle
- Turn the key against the spring (observe the rotation direction)

To hold a manual override position, the key must be wedged.

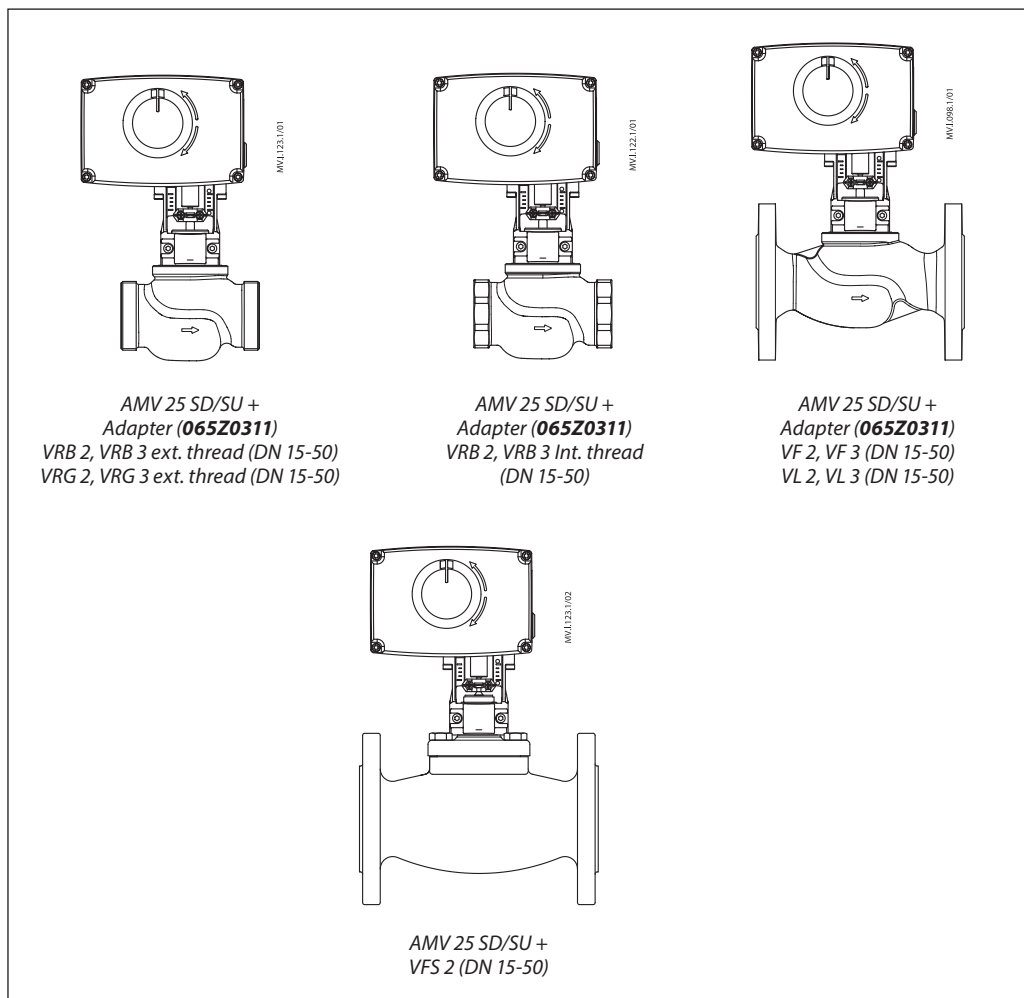
After manual override is not needed:

- Restore power signal.

Dimensions



Actuator - valve combinations





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